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Rebecca Flood, Assistant Commissioner ([Rebecca.Flood@state.mn.us](mailto:Rebecca.Flood@state.mn.us))

Minnesota Pollution Control Agency

520 Lafayette Road North

St. Paul, MN 55155-4194

Jim Brist, Resource Management and Assistance Division ([Jim.Brist@state.mn.us](mailto:Jim.Brist@state.mn.us))

Minnesota Pollution Control Agency

520 Lafayette Road North

St. Paul, MN 55155-4194

Re: 2012-00415-JCB US Steel, Minntac Mine, Mountain Iron, MN  
DRAFT Clean Water Act Section 401 Certification for Section 404 Permit  
483-acre Mine Pit Extension, Access Road Relocation

Dear Ms. Flood, Mr. Brist:

These comments are submitted on behalf of WaterLegacy, a non-profit organization dedicated to protection of Minnesota's water resources and the communities that rely on them. We received electronic notice on Friday, December 27, 2013 that the Minnesota Pollution Control Agency (MPCA) had posted a proposed Section 401 Water Quality Certification for the 483-Acre Minntac, Mountain Iron, Minnesota Mine Pit Extension and Access Road Relocation ("Minntac Mine Expansion"). The notice required that the MPCA would accept input or feedback until January 7, 2014.

Although we are pleased to have the opportunity to provide comments on the MPCA's draft Section 401 Certification, we believe that the time provided for public input is insufficient. We would request that the MPCA extend the time for public comment for at least 30 days and schedule the proposed certification before members of the MPCA Citizens' Board.

This is a highly controversial matter, involving a mining facility that has violated Minnesota water quality standards for decades and is currently under investigation by the United States Environmental Protection Agency (EPA) for discharge of pollutants in violation of the Clean Water Act. (See Exhibit 1, MPCA Letter to David Johnson, USX, Feb. 16, 2000, and Exhibit 2, EPA Letter to U.S. Steel, Aug. 10, 2011, attached).

WaterLegacy appreciates that the MPCA has proposed to include compensatory mitigation conditions for wetland and stream impacts related to the proposed Minntac Mine Expansion. However, we believe that the proposed Section 401 certification fails to comply with federal regulations and state rules for the following reasons:

- There is no reasonable assurance that the Minntac Mine Expansion will be

conducted in a manner that will not violate applicable water quality standards.

- There are unresolved noncompliance issues pertaining to applicable state and federal pollution control statutes that preclude Section 401 certification.

**1. Legal Standard: MPCA Must Deny Section 401 Certification Where Compliance with Applicable Water Quality Standards Cannot Be Assured and Noncompliance is Unresolved.**

The Clean Water Act requires that Section 401 certifications must ensure compliance with effluent limitations, water quality limitations and other appropriate requirements of state law. 33 U.S.C. §1341(d). Federal regulations promulgated to implement the Clean Water Act require that a Section 401 certification contain “A statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.” 40 C.F.R. §120.2(a)(3).

In addition, Minnesota rules preclude Section 401 certification if the facility for which certification is sought does not comply with federal or state pollution control rules or has unresolved compliance issues. Minnesota Rule 7001.1450, Subpart 1(B) requires that the MPCA “shall” make a final determination with respect to section 401 certification to deny or revoke a section 401 certification upon making the findings set forth in part 7001.0140, subpart 2. The referenced subpart states:

Subp. 2. **Agency findings.** The following findings by the agency constitute justification for the agency to refuse to issue a new or modified permit, to refuse permit reissuance, or to revoke a permit without reissuance:

- A. that with respect to the facility or activity to be permitted, the proposed permittee or permittees will not comply with all applicable state and federal pollution control statutes and rules administered by the agency, or conditions of the permit;
- B. that there exists at the facility to be permitted unresolved noncompliance with applicable state and federal pollution control statutes and rules administered by the agency, or conditions of the permit and that the permittee will not undertake a schedule of compliance to resolve the noncompliance.

**2. Record: Compliance with Applicable Water Quality Standards Cannot be Reasonably Assured**

The proposed Minntac Mine Expansion would increase discharge at the Minntac mine site and Minntac tailings basin that already fails to comply with applicable state pollution control rules.

United States Environmental Protection Agency (“EPA”) comments to the United States Army Corps of Engineers (“USACE”) on the Minntac Mine Expansion in October 2012 cautioned that

the proposed expansion would impact receiving waters at both the mine and tailings basin. The EPA stated, “The expansion would result in an additional dewatering discharge . . . The expansion would also result in additional tailings being deposited in the tailings basin. Therefore, it appears that both the tailings basin and mining area receiving waters would be affected by the expansion of the mine.” (Exhibit 3, EPA Letter to Tamera Cameron, Oct. 22, 2012).

The Minnesota Department of Natural Resources (“MDNR”) in its Environmental Assessment Worksheet (“EAW”) also noted that the Minntac Mine Extension could increase the level of constituents in downstream receiving waters:

Increased in-pit disposal may result in runoff, and therefore mine sump dewatering discharges, with elevated concentrations of certain dissolved constituents (e.g., sulfate, hardness, alkalinity, chloride). This could result in an increase of these constituents in downstream receiving waters. (Exhibit 4, MDNR, Minntac Mine Extension EAW, p. 29)

With respect to stockpiles and the new mine pit area, MDNR explained, “The extension will expose additional materials in stockpile areas as well as in the new pit area. Future increases in sulfate levels could potentially be associated with the accumulation over time of additional materials and areas exposed to the elements.” (*Id.*, p. 45). The EAW estimated that Minntac mine area dewatering discharge would increase by 5 percent. (*Id.*, p. 13)

The impacts on water quality from the Minntac Mine Expansion are particularly salient due to the uses and impairments of receiving and downstream waters.

The USACE, in its Public Notice pertaining to the Minntac Extension, highlighted the potential impact of the expansion on wild rice waters, stating, “The Sandy River is located adjacent to Minntac’s tailings basin. The Sandy River, and its downstream receiving water, the Pike River, are both designated wild rice waters. The traditional ricing of these waters is well known.” (Exhibit 5, USACE Public Notice for Minntac Mine Extension, p. 9).

The MPCA, in its August 2013 and November 2013 working notes, proposed designating Sandy Lake and Little Sandy Lake (the “Twin Lakes”) and Sandy River as wild rice impaired waters. (Exhibit 6, MPCA Working Notes for 2014 Wild Rice Impaired Waters List). Both the use of Minntac receiving waters for the production of wild rice and the levels of sulfate currently impairing those waters are matters of record within the MPCA.

The MDNR, in its Minntac Mine Extension EAW, also identified receiving waters from the Minntac Mine Expansion as significant for fish and aquatic habitat:

The West Pit extension area includes an unnamed tributary to Kinney Lake (referenced as Kinney Creek) and an unnamed headwater tributary of the West Two River, which flows into the West Two River Reservoir. These streams flow into either Kinney Lake or the West Two River Reservoir, and may support seasonal fish populations, particularly during spring spawning periods. The East Pit extension would reduce the length of Parkville Creek, and a short section on an unnamed stream. Parkville Creek flows into the West Two River Reservoir, and is a major tributary. (Ex. 4, MDNR EAW, *supra*, p. 12)

The MDNR described several potential impacts to fisheries uses from loss of habitat and changes in hydrology resulting from the Minntac Mine Expansion. (*Id.*, p. 12)

The MPCA 2012 Clean Water Act Section 303(d) impaired waters designation identified Sand Creek from unnamed creek to the St. Louis River as impaired for aquatic life due to fishes bioassessments and designated West Two River from the West Two River reservoir to McQuade Lake outlet as impaired for aquatic life due to aquatic macroinvertebrate bioassessments. (MPCA, Minnesota's Impaired Waters and TMDLs, <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/impaired-waters-list.html>). Analysis is currently underway to determine the extent to which recent these recently-designated aquatic life impairments downstream of mining facilities are related to toxicity stressors.

The MPCA's 2012 impaired waters designation also listed the Minntac tailings basin as impaired for aquatic consumption due to mercury in fish tissue.

The record of exceedances of water quality standards at both the Minntac mine and the Minntac tailings basin, coupled with predictions of additional loading of constituents, demonstrates that there is no reasonable assurance that the Minntac Mine Expansion will be conducted in a manner that will not violate applicable water quality standards.

Even as U.S. Steel (USS) advocated to the USACE in favor of its Section 404 permit, the company admitted that its discharges from the Minntac mining area have exceeded a number of Minnesota water quality standards. On July 9, 2013, USS stated that its mine area discharge was "either continuously or occasionally exceeding the following downstream water quality standards, depending upon the outfall": Mercury (Class 2B Lake Superior Wildlife Chronic Standard); Hardness (Class 3C); Specific Conductance (Class 4A). (Exhibit 7, U.S. Steel Letter to USACE, July 9, 2013, p. 18) With respect to mercury, USS acknowledged:

Quarterly sampling of Mining Area discharges since 2004 has indicated that the Lake Superior Class 2B mercury discharge standard has been exceeded in approximately 20 - 25% of the samples collected from these outfalls. The majority of these exceedances are within 50 - 70% of the standard at SD003 and 25 - 50% of the standard at SD004. (*Id.*, p. 18)

WaterLegacy reviewed Discharge Monitoring Reports (DMRs) that were included in the Attachments submitted by U.S. Steel as part of its application to the USACE for the Minntac Mine Expansion Section 404 wetlands destruction permit. These DMRs confirm that Minntac mine pit dewatering, even before the addition of dewatering discharge from the proposed Minntac Mine Expansion, is out of compliance with Minnesota water quality standards.

Surface discharge site SD004, in the area of the proposed Expansion, demonstrates violations of mercury, hardness, specific conductance, and sulfate water quality standards. Mercury exceeding the Great Lakes water quality standard of 1.3 ng/L was reported in Sept. 2008, Dec. 2008, June 2011 and Dec. 2011. (Exhibit 8, Minntac Mining Area SD004 DMRs)

From March 2008 to March 2013, every DMR sample for SD004 showed hardness above Minnesota's water quality standard of 500 mg/L, with an average concentration of 795 mg/L.

With respect to specific conductance, from March 2008 through March 2013, every DMR sample exceeded Minnesota's specific conductance standard of 1000 mhos/cm; the average specific conductance level was 1334 mhos/cm (equivalent to 1334  $\mu$ hos/cm). (*Id.*)

Although Minnesota's specific conductance water quality standard is located in a section of the rules pertaining to agricultural irrigation, it is well known that high levels of specific conductivity are toxicity stressors to aquatic life. The EPA web site that explains what is conductivity and why is it important, states the following, "Studies of inland fresh waters indicate that streams supporting good mixed fisheries have a range between 150 and 500  $\mu$ hos/cm. Conductivity outside this range could indicate that the water is not suitable for certain species of fish or macroinvertebrates." (<http://water.epa.gov/type/rs/monitoring/vms59.cfm>)

Sulfate discharge from Minntac mine pit dewatering far exceeded the Class 1B drinking water standard of 250 mg/L, let alone the concentration that would ensure compliance with the 10 mg/L water quality standard applicable in receiving waters used for the production of wild rice. From March 2008 through March 2013 all measured sulfate discharges at SD004 were above the 250 mg/L Class 1B standard, and the average sulfate concentration was 432 mg/L. (Ex. 8, *supra*, SD004 DMRs)

The USACE asked USS to quantify the total sulfate loading to the St. Louis River and other wild rice waters that would result from mine pit dewatering under the proposed Minntac Mine Expansion. WaterLegacy has not received this data, although the response by USS below suggests that the proposed Expansion would increase sulfate loading at the mine site.

**USACE Question:**

- *Quantify the total amount of sulfate that would be discharged into St. Louis River Watershed (West Two River and Sand Creek watersheds) as a result of mine pit dewatering within the pit extension area.*

**USS Response:**

USS will require additional time to arrive at an accurate response to the question posed, primarily due to the difficulties associated with predicting the amount of groundwater that will be collected in the mine pit dewatering sumps as the mine pits get deeper in the Extension areas. USS has engaged consultants to assist in compiling the response to this question but due to the complexities of the area an accurate response could not be completed in the allotted time. It should be noted that the Biwabik Iron Formation dips at an angle of approximately 7 degrees to the south in the vicinity of Minntac, and therefore the depths to recoverable ore will continue to increase as mining progresses through the Extension. USS will provide a response to this additional information request within 30 days of this submittal. (Ex. 7, *supra*, USS Letter, July 9, 2013, p. 19)

U.S. Steel's response to USACE questions about the Minntac Mine Expansion also admitted that Minntac tailings basin discharges exceed Minnesota water quality standards for hardness, sulfates, specific conductance and total dissolved solids. (*Id.*, p. 8)

USS further acknowledged that its proposed mine expansion would result in an incremental increase of sulfate load to receiving waters of the Sand River Watershed. The company estimated that Minntac's seepage collection system on the east side of the tailings basin was capturing 50

percent of the seepage. USS predicted a significant increase in sulfate loading upstream of wild rice waters if its expansion were approved, “the incremental increase in sulfate load to the Sand River Watershed due to the Minntac Extension would be closer to 350 tons per year.” (*Id.*, p. 12)

In addition to causing or contributing to further impairment of downstream wild rice, the MPCA has long cautioned that increased sulfate loading from the Minntac tailings basin may increase mercury methylation and downstream mercury contamination of fish. As excerpted in WaterLegacy’s attached comment requesting further environmental analysis of the Minntac Mine Expansion, MPCA’s comments on a Water Inventory Reduction Project proposed by Minntac several years ago highlight concerns about sulfates and mercury:

[R]ecent research has shown that sulfate addition may promote the methylation of mercury. Under anaerobic conditions, sulfate provides one of several components needed for the growth of a certain type of bacteria responsible for methylation of mercury in the environment. Therefore, increased sulfate concentrations associated with the proposed project could result in an increase in methylmercury and fish tissue mercury concentrations in the impacted downstream waters. (Exhibit 9, WaterLegacy Comment, p. 14, quoting MPCA Water Inventory DEIS, p. S-10)

The available information and evidence on the relationship of sulfur and fish mercury levels lead to the reasonable conclusion that increased sulfate mass discharges downstream of the Minntac tailings basin would cause increased fish mercury levels, as discussed in the Mercury and Methylmercury Impact Assessment Technical Memorandum. (*Id.*, quoting MPCA Water Inventory FEIS, p. 25)

If increased concentrations of sulfate lead to methylation of mercury and increasing accumulations of mercury in fish tissue, there could be continued impacts to the economic activities related to recreational angling and the commercial fishery. . . potential increases in the methylation of mercury due to increased sulfate levels may impact other recreational and fisheries activities within the Sandy/Pike River and the Dark River, as well as Pike Bay and Lake Vermilion more generally. (*Id.*, p. 15, quoting MPCA Water Inventory DEIS, p. S-21).

Where information furnished by the applicant confirms that discharge from a facility exceeds water quality standards and that these exceedances are likely to increase as a result of activities under a proposed Section 404 permit, the Clean Water Act as well as Minnesota rules requires denial of Section 401 certification. Denial of Section 401 certification is further required on this record pertaining to the Minntac mine area and tailings basin since the existing and proposed increases in noncompliance have the potential to cause or contribute to use impairments in receiving and downstream waters.

### **3. Record: Outstanding Noncompliance Issues Are Unresolved**

The MPCA has documented (Ex. 1, *supra*, MPCA Feb. 16, 2000 letter to USX) that since at least 1987, the Minntac tailings basin has had unresolved water quality noncompliance issues related to sulfates.

MPCA's Compliance Status report from 2010, attached as Exhibit 10, documents at least five enforcement actions at the Minntac tailings basin for noncompliance with Minnesota's hardness and sulfate standards since 2006, despite various schedules of compliance and several monetary penalties for water quality violations.

The loading of pollutants to receiving waters as a result of these unresolved noncompliance issues has been significant. The MPCA report summarized:

Year of Operation	Excess Pounds of Sulfate	Excess Pounds of Hardness
2006	80,847	0
2007	69,839	241,167
2008	54,904	352,125
2009	18,207	31,133
2010	57,558	741,468

Unfortunately, for a quarter of a century MPCA has been unwilling to compel compliance with state water quality standards at the Minntac tailings basin. For two decades, Minntac has continued to discharge pollutants from its tailings basin without even holding a valid NPDES/SDS permit.

Minnesota rules pertaining to Section 401 certification were intended to prevent continued expansion of facilities that have not come into compliance with water quality standards. By stating that the MPCA "shall" deny or revoke a 401 certification on the finding that there is "unresolved noncompliance" with state pollution control statutes and rules, a limit was placed on the MPCA's ability to excuse noncompliance. At the very least, when a discharger sought a Section 404 permit for expansion that would destroy additional wetlands and streams, Clean Water Act Section 401 rules would compel the Agency to deny certification and provide some consequence for non-compliance.

#### **4. Proposed Conditions Do Not Resolve Either Issue Requiring Denial of Certification**

In its draft Section 401 certification letter, the MPCA has provided some conditions to address wetland and stream mitigation. WaterLegacy does not object to these conditions. However, conditions pertaining to wetland and stream mitigation neither address existing exceedances of water quality standards at the Minntac mine and tailings basin nor the decades of unresolved noncompliance.

The MPCA, in its draft certification letter, has disregarded and failed to analyze water quality information supplied by the applicant that demonstrates exceedance of water quality standards at both the Minntac mine and tailings basin. The MPCA has disregarded and failed to analyze information supplied by the applicant regarding increased loading of sulfates and other chemical constituents that would result if the Minntac Mine Expansion were certified. The MPCA has, additionally, failed to assess the impacts on waters that have been designated as impaired for aquatic life or for mercury contamination of fish and impacts on waters used for the production of wild rice that MPCA's data indicates should also be designated as "impaired waters" pursuant to Section 303(d) of the Clean Water Act.

The permit applicant has admitted that Minntac mine dewatering and tailings basin violate water quality standards and that the Minntac Mine Expansion would increase sulfate loading at the tailings basin by 350 tons per year. WaterLegacy has not received information and the MPCA has not disclosed how mine dewatering from the proposed Mine Expansion might further increase sulfate loading, potentially causing or contributing to additional impairment of downstream wild rice waters or increasing mercury bioaccumulation in the lower reaches of the St. Louis River.

The MPCA is well aware of the risk of mercury bioaccumulation in the St. Louis River. The MPCA has analyzed mercury concentrations in fish tissue and determined that lower reaches of the St. Louis River have higher mercury concentrations in fish tissue than do fish in other regional waters. (Exhibit 11, MPCA St. Louis River Fish Mercury Analysis, p. 4). Addressing effects of sulfate loading on mercury bioaccumulation downstream is necessary to protect human health as well as the Great Lakes water quality standards set through international treaties.

Having done no pertinent analysis of violations of mercury, sulfate, specific conductance and hardness standards, the MPCA's draft Section 401 conditions does not address the water quality compliance issues raised by the proposed Minntac Mine Expansion. None of the conditions in the MPCA's draft Section 401 certification provide any assurance, let alone reasonable assurance, that the Minntac mine and tailings basin noncompliance with water quality standards won't continue and increase should the Minntac Mine Expansion proceed.

Finally, the MPCA's certification completely fails to address the question of unresolved compliance. Minnesota rules were written, at the very least, to ensure that dischargers operating in disregard of the law could not continue to expand without being brought into compliance.

### **Conclusion**

Neither federal nor state law allows the MPCA to certify the proposed Minntac Mine Expansion. This project is a textbook case of what Section 401 was intended to prevent – the increase of discharge that already violates water quality standards by a polluter operating outside the law for a matter of decades.

WaterLegacy is concerned that, where mining is concerned, Minnesota state regulators are unwilling or unable to say “no,” regardless of the facts or the law. In the case of the Minntac mine and tailings basin, the lack of regulatory constraints may have already impaired waters used for the production of wild rice and for aquatic life and increased mercury contamination of fish, impairing their use for consumption. This wholesale regulatory failure is more troubling since the resources impaired are vital to subsistence anglers and gatherers, including Minnesota tribes, whose treaty rights are also compromised by the failure of regulatory action.

WaterLegacy would request that the MPCA's draft Section 401 certification be withdrawn pending the following:

- 1) MPCA analysis, in consultation with tribes, of the impacts of sulfate loading and mercury discharge from Minntac mine dewatering (based on complete data secured from USS) and from the Minntac tailings basin under existing conditions and the proposed Minntac



Mine Expansion, on waters used for the production of wild rice, mercury bioaccumulation in fish, including waters where these uses have been impaired.

- 2) MPCA analysis, in consultation with tribes, of the impacts of Minntac's specific conductivity exceedances at the Minntac mine and tailings basin under current conditions and the proposed Minntac Mine Expansion, and whether stressors related to the toxicity of mining discharge are causing or contributing to aquatic life impairments;
- 3) MPCA development, in consultation with tribes, of such conditions as would be needed to prevent further impairment of wild rice, bioaccumulation of methylmercury or aquatic life impairments caused or contributed to by existing and proposed Minntac mine and/or Minntac tailings basin discharge;
- 4) MPCA's issuance of a valid permit for the Minntac tailings basin and MPCA's modification of the Minntac mine permit, both of which must include effluent limitations for mercury, sulfates, specific conductance, hardness and any other parameters that have a reasonable potential to exceed water quality standards.

Until such time as the above steps are taken in conformity with law, WaterLegacy proposes that Section 401 certification be denied pursuant to the Clean Water Act and Minnesota statutes and rules.

Please contact me at 651-646-8890 if you have questions regarding this matter. I look forward to hearing the next procedural steps you would propose to take.

Sincerely yours,



Paula Goodman Maccabee  
Counsel/Advocacy Director for WaterLegacy

cc: Tinka Hyde, Water Division Director, EPA Region 5 (Hyde.Tinka@epa.gov)  
Tamera Cameron, Chief, Regulatory Branch, USACE  
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### **ATTACHED EXHIBITS**

- Exhibit 1      MPCA Letter to David Johnson, USX, Feb. 16, 2000
- Exhibit 2      EPA Letter to U.S. Steel, Aug. 10, 2011
- Exhibit 3      EPA Letter to Tamera Cameron, USACE, Oct. 22, 2012
- Exhibit 4      MDNR, EAW for Minntac Mine Extension, Aug. 1, 2012
- Exhibit 5      USACE, Public Notice for Minntac Mine Extension, July 3, 2012
- Exhibit 6      MPCA Working Notes for 2014 Wild Rice Impaired Waters List, 2013
- Exhibit 7      U.S. Steel Letter to USACE, July 9, 2013
- Exhibit 8      Minntac Mining Area SD004 DMRs, 2008-2013
- Exhibit 9      WaterLegacy Comment to MDNR, Sept. 5, 2012
- Exhibit 10     MPCA, Minntac Tailings Basin Compliance Report, 2010
- Exhibit 11     MPCA, St. Louis River Fish Mercury Analysis, Feb. 12, 2012